Spiraea septentrionalis

Alpine meadow-sweet

Status

Federal status: G2? N1N2, Not listed
NH state status: SR, Candidate
ME state status: S1, Special Concern

Flora Conservanda Division 2, regionally rare taxa with fewer than 20 occurrences in New England. There is no information available on population trends.

The expert panel estimated the range-wide and WMNF viability at outcome B to C now and in the next 20 years. Trail impact on this species and its community in the Presidentials is not that high. Local demes have been lost, but the overall geographic extent of the taxon has not been reduced. It is expected that recreation impacts will increase in the next 20 years, but so will public awareness, which may mitigate some impacts. If off-trail hiking prohibitions are not enforced, and specific sites are not protected, the outcome will move toward C in next 20 years.

Distribution

Nearly endemic to southeastern Canada, with a few sites on alpine summits of New York and New England, and disjunct occurrences at one site in Michigan and one site in Virginia.

New Hampshire Natural Heritage Inventory has not tracked occurrences of this species, though they are beginning to do so. Occurrences are documented by other sources in Albany, Harts Location, and Tuckerman Ravine. The Tuckerman Ravine location is definitely on the WMNF; the others may be on or near the Forest depending on exact location. A local expert is sure he has seen this species elsewhere on the WMNF, but has not tracked locations. He believes it is fairly common in suitable habitat on the Forest. In Maine this species is documented from Mt. Katahdin and Franklin County, neither of which is near the WMNF.

Habitat

In New Hampshire, *Spiraea septentrionalis* is an alpine/subalpine obligate that occurs primarily in cool wet ravines and snowbank communities where snow stays a long time. It needs open habitats where forest cannot get established, which would define the lower elevation where it could occur.

Considered by the expert panel to be part of the snowbank/streamside/wet ravine alpine communities. Heavy late melting snow, high moisture levels, and a relatively thick organic soil layer characterize these patch communities. Snow, thick soils, and wet ravine conditions provide the shelter and moisture levels that are important to this species. Ice and snow loading is important because it provides protection from harsh winters and fluctuations in spring temperatures. Other species in wet ravine habitats benefit from water and ice movement because it reduces competition, but it is unknown if this is true for *Spiraea septentrionalis*.

Limiting Factors

Hiking, winter camping, and late spring use are probably the most important factors affecting the snowbank /streamside/wet ravine community system, including *Spiraea septentrionalis*. The threats to this habitat from winter camping are not well documented, but are believed by several experts to be from compaction and loss of snow load if snow caves are built on top of less than 1-2' of snow, and concentration of waste in snowbank community patches. Winter camping is a greater concern for snowbank communities that are used for camping repeatedly in a winter. This threat is probably less for populations of this species that occur in ravine habitats.

Changes to hydrology could pose a threat to this species, but the threat from trampling and other recreational use is greater. Global warming and acid rain may be threats, but it is uncertain how much they impact alpine species, and they are less important other threats.

Viability concern

The expert panel indicated that snowbank/wet ravine/streamside community species are very scattered; their distribution and association with others is unpredictable, making selection of focal or surrogate species for these communities inappropriate. G2? and N1N2 rankings indicate a concern for this species globally and in North America. Future outcome is expected to decline if hikers are not kept on trails and known occurrences are not protected, so species was kept on list to help ensure that sites are protected.

Management activities that might affect viability

The factor with potential to impact this species that the WMNF has some control over is trampling by hikers and other recreationists. Management that would reduce the density of trails in the alpine zone, and help keep hikers on designated trails would reduce the potential for trampling.

Local experts were asked about winter camping guidelines and potential impacts to snowbank community plants. They felt the current requirement for 2' of snow under any snow cave would be sufficient but are concerned, based on observations in the past, that some winter campers do not abide by this rule. The greater unknown is concentration of wastes that could alter nutrient availability. Encouraging winter campers to pack out waste would help reduce impacts.

Trail construction could affect this species if it would go through snowbank, streamside, or wet ravine habitat, alter the hydrology of a suitable area, or increase human traffic near suitable habitat. Trail maintenance activities could alter habitat suitability or directly impact individuals.

References

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